


**INFORMATION DISCLOSURE CITATION**
*(Use several sheets if necessary)*
**Docket Number (Optional)**
**4555-118US**
**Application Number**
**10/620,159**
**Applicant(s)**
**HAPPER et al.**
**Filing Date**
**July 15, 2003**
**Group Art Unit**
**TBD**
**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>SC</i>		4,122,408	10/24/1978	WALLS	331	3	
<i>SC</i>		4,425,653	01/10/1984	CUTLER	372	70	
<i>SC</i>		4,476,445	10/09/1984	RILEY, Jr.	331	3	
<i>SC</i>		5,146,184	09/08/1992	CUTLER	331	3	
<i>SC</i>		4,943,955	07/24/1990	RABIAN et al.	368	156	
<i>SC</i>		5,379,000	01/03/1995	BREWER et al.	331	3	
<i>SC</i>		6,157,261	12/05/2000	AUDIOIN et al.	331	3	
<i>SC</i>		5,606,291	02/25/1997	VERBANETS	331	3	
<i>SC</i>		5,642,625	07/01/1997	CATES, Jr et al.	62	55.5	
<i>SC</i>		5,657,340	08/12/1997	CAMPARO et al.	372	69	
<i>SC</i>		5,852,386	12/22/1998	CHANTRY et al.	331	94.1	

**FOREIGN PATENT DOCUMENTS**

REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

		S. Appelt, A. Ben-Amar Baranga, C.J. Erickson, M.V. Romalis, A.R. Young, and W. Happer, Theory of spin-exchange optical pumping of $^3\text{He}$ and $^{129}\text{Xe}$ , Phys. Rev. A 58, 1412-1439, Issue 2, August 1998.
		Hyatt M. Gibbs and Robert J. Hull, Spin-Exchange Cross Sections for Rb87-Rb87-Cs133 Collisions, Phys. Rev. 153, 132-151, Issue 1, 5 January 1967.

**EXAMINER**
*Joseph Cleary*
**DATE CONSIDERED**
*11/23/04*
**EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



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FEB 09 2004

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**OTHER DOCUMENTS** *(Including Author, Title, Date, Pertinent Pages, Etc.)*

<i>RL</i>	Bell, William E., Bloom, Arnold L., optical Detection of Magnetic Resonance in Alkali Metal Vapor, Phys. Rev. 107, 1559-1556, Issue 6, September 1957.
<i>RL</i>	Walter, D.K., Griffith, W.M. and Happer, W., Magnetic Slowing Down of Spin Relaxation due to Binary Collisions of Alkali-Metal Atoms with Buffer-Gas Atoms, Phys. Rev. Lett. 88, 093004 (2002).

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**Form PTO-A820  
(also form PTO-1449)**

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**SHEET 2 OF**

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*QC* Ressler, N.W., Sands, R.H., Stark, T.E., Measurement of Spin-Exchange Cross Sections for Cs133, Rb87, Rb85, K39, and Na23, Phys. Rev. 184, 102-118, Issue 1, August 1969

*QC* Anderson, L.W and Baird, James C., N14-N15 Hyperfine Anomaly, Phys. Rev. 116, 87-98, Issue 1, October 1959

*QC* Srinivasa, K. and Rajeswari, V., Quantum Theory of Angular Momentum: Selected Topics, Published by Springer-Verlag and Narosa Publishing House (1993)

*QC* Appelt, S, Ben-Amar Baranga, Young, A. R., Happer, W., Light narrowing of rubidium magnetic-resonance lines in high-pressure optical-pumping cells, Physical Review A, Volume 59, Number 3, pp. 2078-2084.

EXAMINER

*Joseph Chang*

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